

What is claimed is:

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5 1. A burst mode optical receiver, comprising:

a differential preamplifying means for detecting a difference between a digital data input signal and a reference signal to thereby generate an output signal;

10 a reference signal generating means, including a multistage amplifying and a storing means, for detecting a peak value of the output signal and comparing the output signal with the reference signal through a multistage amplifying means to thereby generate the reference signal corresponding to the peak value of the output signal, and for storing a peak value of the reference signal and providing the reference signal to the differential preamplifying means and the multistage amplifying means through the storing means.  
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2. The burst mode optical receiver of claim 1, wherein the differential preamplifying means includes:

20 a current source for compensating an offset of the differential preamplifying means.

3. The burst mode optical receiver of claim 1, wherein the multistage amplifying means includes two or more amplifiers.  
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4. The burst mode optical receiver of claim 3, wherein the

number of the amplifiers is determined by taking both the gain and a power dissipation of the reference signal generating means into consideration.